CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 92-024

SITE CLEANUP REQUIREMENTS FOR:

SALINAS REINFORCING, INC.; ROSINDO SALINAS and CORA SALINAS; JOHN ERMAN and CHERIE ERMAN; DONALD PATCHIN and SONYA PATCHIN; RICHARD MARTINI; LOX EQUIPMENT COMPANY; RICHMOND-LOX EQUIPMENT COMPANY; RICHMOND-LOX EQUIPMENT COMPANY dba LOX EQUIPMENT COMPANY; and UNION REBAR, INC.; LIVERMORE, ALAMEDA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board) finds that:

1. Salinas Reinforcing, Inc. is a manufacturing facility that fabricates reinforcing bars to be used in concrete construction. It is owned by Rosindo and Cora Salinas, John and Cherie Erman, Donald and Sonya Patchin, and Richard Martini. Previous owners and operators of the site include Lox Equipment Company; Richmond-Lox Equipment Company; Richmond-Lox Equipment Company dba Lox Equipment Company; and Union Rebar, Inc. For the purposes of this Order, the aforementioned parties are hereinafter collectively called the Dischargers.

2. In addition to the above Dischargers, Richmond Tank Car (RTC) was the sole shareholder of Richmond-Lox Equipment Company from 1980 to 1987. At this time, insufficient evidence exists for the Board to fully evaluate whether RTC should be named as a waste discharger.

   Minnesota Valley Engineering (MVE) has been the sole shareholder of Lox Equipment Company since 1987. At this time, insufficient evidence exists for the Board to fully evaluate whether MVE should be named as a waste discharger.

   The Board reserves this determination to a future date when more evidence is available.

3. The site is located at 355 South Vasco Road in Livermore, California and is less than 1/2 mile northwest of Lawrence Livermore National Laboratory (LLNL). It covers 9.9 acres and includes a 55,000 square foot manufacturing building, a 5,000 square foot office building, and an open area (Figure 1).

4. Known potential sources of contamination at the site are as follows:

   a. Past activities at the site involved the assembly, cleaning, degreasing, and painting of cryogenic containers. The containers were cleaned with nitric acid and chromic acid on a pad outside the west side of the building. Some cleaning wastes were discharged into an unlined underground sump and on-site leachfield just south of the pad.

   b. Gasoline was stored in a 500-gallon underground tank on the east side of the building.

   c. 55-gallon drums containing paint and paint residues were stored on the north side of the site in the open and may have overflowed occasionally.

   d. Trichloroethylene (TCE) was used in a vapor degreasing operation and stored in an aboveground tank on the south side of the building.

5. The underground fuel storage tank was removed in 1987. The tank was single-wall steel and approximately 20 years old. During the tank removal, numerous holes were observed along its lower margin and base. Three groundwater monitoring wells were constructed and water samples from these wells contained concentrations of benzene up to 9,900 ppb, toluene up to 12,000 ppb, ethylebenzene up to 2,600 ppb, and xylene up to 13,000 ppb.

6. From March through October 1988, SCS Engineers conducted a three phase environmental investigation of the site. SCS performed a surficial-soil vapor survey for volatile organic vapor using a photoionization probe. 20 points in the northern area of the site were sampled and all reported concentration values were below the instrument's detection limit of 10 ppm.

   SCS installed additional monitoring wells to sample for any subsurface occurrence and distribution of VOCs. SCS water samples from their wells contained concentrations of TCE up to 1,100 ppb. LLNL did additional sampling of on-site wells and found concentrations of TCE up to 2,700 ppb and 1,2-DCE up to 77 ppb.

7. As part of their remedial investigations, LLNL was requested to further characterize the groundwater plume in the Vasco Road-Patterson Pass Road Area, northwest of LLNL (Figure 2). This area includes the Salinas Reinforcing site. LLNL submitted a report "Possible Sources of VOCs in the Vasco Road-Patterson Pass Road Area, Livermore, California" where three areas of concern were identified:

   a. a maximum groundwater concentration of 2,700 ppb TCE from a well on the Dischargers' property,

   b. a minor groundwater concentration of 12 ppb TCE in MW-5 on LLNL property, and

   c. an intermediate concentration of 1,220 ppb TCE in MW-564 from an undetermined source.

8. The Board finds that the TCE contamination discussed in Finding 7.a originated from the Dischargers' property and requires further investigation and cleanup.

9. LLNL has asserted, and the Board concurs, that the TCE contamination discussed in Finding 7.b originated from LLNL property and should be remediated by LLNL

10. The Board finds that the the TCE contamination discussed in Finding 7.c is of unknown origin at this time.

11. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan), on December 17, 1986. The Basin Plan contains water quality objectives for non-tidal waters Arroyo Mocho, Arroyo Seco, Arroyo Las Positas, Arroyo de la Laguna, and their tributaries; and for Livermore-Amador Valley groundwaters.

12. The existing and potential beneficial uses of the groundwaters underlying the Livermore-Amador Valley groundwater basin and its subbasins include:

    a. Municipal and domestic supply
    b. Industrial supply
    c. Industrial service supply
    d. Agricultural supply

13. The existing and potential beneficial uses of the surface water in the Livermore-Amador Valley groundwater basin include:

    a. Contact and non-contact water recreation
    b. Wildlife habitat
    c. Groundwater recharge
    d. Fish migration and spawning

14. On October 28, 1968, the State Board adopted Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality Waters in California." This policy calls for maintaining the existing high quality of State waters unless it is demonstrated that any change would be consistent with the maximum public benefit and not unreasonably affect beneficial uses. The original release of wastes and continuing discharge to the groundwater beneath the site is in violation of this policy; therefore, the groundwater quality needs to be restored to its original quality to the extent reasonable.

15. On March 30, 1989. The Regional Water Quality Control Board incorporated the State Board Policy of "Sources of Drinking Water" into this Regional Board's Basin Plan. The policy provides for a Municipal and Domestic Supply Designation for all waters of the State with some exceptions. Two relevant exceptions are:

    a. the total dissolved solids in the groundwater exceed 3,000 mg/l, and

    b. the water source does not provide sufficient water to supply a single well capable of producing and average, sustained yield of 200 gallons per day.

    Neither of these exemptions apply to the Livermore-Amador Valley groundwater basin and its subbasins. Therefore, the Livermore-Amador Valley groundwater basin and its subbasins is considered a source of Drinking Water under State Board Resolution 88-63.

16. The Dischargers have caused or permitted and threatened to cause or permit, waste to be discharged or deposited where it is or probably will be discharged to waters of the State and creates or threatens to create a condition of pollution or nuisance.

17. This action is an Order to enforce the laws and regulations administered by the Board. This action is categorically exempt from the provisions of the California Environmental Quality Act pursuant to Section 15321 of the Resources Agency Guidelines.

18. This Order contains tasks for completion of soil and groundwater characterization of the site and affected offsite areas, implementation and evaluation of interim remedial actions for soil and groundwater pollution, and implementation of final cleanup actions. The tasks and schedules set forth were developed in cooperation with the Dischargers. Interim and final and cleanup measures are needed to alleviate the threat to the environment posed by the continued migration of contamination plumes and to provide a substantive basis for designing and evaluating the effectiveness of final cleanup alternatives.

19. The Board has notified all interested agencies and persons of its intent under Section 13304 of the California Water Code to prescribe Site Cleanup Requirements and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

20. The Board, at a public hearing, heard and considered all comments pertaining to this discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that the Dischargers shall cleanup and abate the effects described in the above findings as follows:

A. PROHIBITIONS

1. The discharge or disposal of wastes or hazardous materials in a manner which will degrade the water quality or adversely affect the beneficial uses of the groundwaters of the State is prohibited.

2. The discharge or disposal of wastes or hazardous materials through direct surface discharge or runoff or subsurface transport in a manner which will degrade the water quality or adversely affect the beneficial uses of the surface waters of the State is prohibited.

3. Activities associated with site investigation or cleanup which will cause significant adverse migration of pollutions is prohibited.

4. The cleanup and containment of any polluted soil or groundwater by the discharger which will cause significant adverse spreading or migration of any pollution originating from other sites is prohibited.

B. SPECIFICATIONS

1. The Dischargers shall identify the location of all potential sources of hazardous material disposed of, or discharged to, the Dischargers' facility; and shall determine if a discharge to soil or groundwater has occurred.

2. The Dischargers shall define the horizontal and vertical extent of all soil and groundwater pollution. Local and regional hyrogeological conditions shall be defined in the areas of and contiguous to identified pollution.

3. The Dischargers shall identify and properly seal or abandon all wells within the legal boundaries of the facility which may have been, or threaten to be, conduits for the spread of groundwater pollution.

4. The storage, handling, treatment, or disposal of polluted groundwater shall not create a nuisance as defined in Section 13050(m) of the California Water Code.

5. The cleanup goals for source area soils shall be no greater than 1 ppm for volatile organic compounds. Alternate soil cleanup goals may be proposed based on site specific data. If higher levels of pollutants to be left in soils are proposed, the Dischargers must demonstrate that cleanup to the aforementioned level is infeasible, that alternate levels will not threaten the quality of waters of the State, and that human health and the environment are protected. Final cleanup goals for source area soils must be acceptable to the Executive Officer. If any chemicals are left in the soil, follow-up groundwater monitoring will be required.

6. Final cleanup goals for polluted groundwater, including sources of drinking water, onsite and offsite, shall be background water quality if feasible, in accordance with the State Water Resources Control Board's Resolution 68-16. If background water quality goals are not achievable, as determined by data submitted in annual reports, alternative goals may be proposed and shall be approved by the Board. Alternate goals may include applicable standards, such as Maximum Contaminant Levels, and shall be based on an evaluation of

the cost, effectiveness, and a risk assessment to determine the effects on human health and the environment. These goals shall reduce the mobility, toxicity, and volume of pollutants.

7. If groundwater extraction and treatment is considered as an alternative, the feasibility of water reuse, reinjection, and disposal to the sanitary sewer must be evaluated. Based on Regional Board Resolution 88-160, the Dischargers shall optimize, with a goal of 100%, the reclamation or reuse of groundwater extracted as a result of cleanup activities. The Dischargers shall not be found in violation of this Order if documented factors beyond the Dischargers' control prevent the Dischargers from attaining this goal, provided the Dischargers have made a good faith effort to attain this goal. If reuse or reinjection is part of a proposed alternative, an application for Waste Discharge Requirements may be required. If discharge to waters of the State is part of a proposed alternative, an NPDES permit application must be completed and submitted, and must include the evaluation of the feasibility of water reuse, reinjection, and disposal to the sanitary sewer.

C. PROVISIONS

1. The Dischargers shall perform all investigation and cleanup work in accordance with the requirements of this Order. All technical reports submitted in compliance with this Order shall be satisfactory to the Executive Officer, and, if necessary, the discharger may be required to submit additional information.

2. To comply with all prohibitions and Specifications of this Order, the Dischargers shall meet the following compliance task and time schedule:

COMPLIANCE TASK SCHEDULE

Compliance Documents and Tasks	Compliance Date
a. **WORKPLAN FOR SOIL AND GROUNDWATER POLLUTION CHARACTERIZATION:** Submit a technical report acceptable to the Executive Officer containing a proposal to identify all on-site pollution sources and to define the horizontal and vertical extent of soil and groundwater pollution.	03/01/92
b. **EVALUATION OF POTENTIAL CONDUITS** Submit a technical report acceptable to the Executive Officer which contains the results of a potential conduit study. Any potential conduit should be included which would allow pollutants to migrate from the ground surface to the groundwater, and/or between water bearing zones. These include but are not limited to existing monitoring wells, extraction wells, and sumps as well as historical drainage or water wells.	04/01/92
c. **COMPLETION OF IDENTIFICATION AND CHARACTERIZATION:** Submit a technical report acceptable to the Executive Officer documenting completion of the necessary tasks identified in the technical report submitted for Provision 2.a.	06/01/92

d. INTERIM REMEDIAL ACTIONS — 08/01/92

Submit a technical report acceptable to the Executive Officer which contains an evaluation of interim remedial alternatives, a recommended plan for interim remediation, and an implementation time schedule.

This report shall evaluate the removal and/or cleanup of polluted soils; evaluate alternative hydraulic control systems to contain and to initiate cleanup of polluted groundwater; and include a completed NPDES application to discharge to surface waters, if such an discharge is an element of the plan.

e. CLOSURE OF POTENTIAL CONDUITS — 09/01/92

Submit a technical report acceptable to the Executive Officer which documents the closing of any potential conduits as identified in Provision 2.b. This technical report should include documentation of appropriate permits, types and quantities of materials used to seal each well, and/or the method of well destruction, as well as a description/location of the water bearing zones which were sealed.

f. COMPLETION OF INTERIM REMEDIAL ACTIONS — 11/01/92

Submit a technical report acceptable to the Executive Officer documenting completion of the necessary tasks identified in the technical report submitted for Provision 2.d.

g. EVALUATE INTERIM HYDRAULIC CONTAINMENT AND SOIL REMOVAL MEASURES — 11/01/93

Submit a technical report acceptable to the Executive Officer which evaluates the effectiveness of the interim hydraulic containment system.

Such an evaluation shall include, but need not be limited to, an estimation of the flow capture zone of the extraction wells, establishment of the cones of depression by field measurements, and presentation of chemical monitoring data, if extraction wells are proposed. This report shall also evaluate and document the removal and/or cleanup of polluted soils, if removal and/or cleanup is an element of the remedial measure.

h. MODIFICATION TO INTERIM ACTIONS — 02/01/94

Specific modifications to the system and an implementation time schedule shall be proposed in the event that the soil remediation or hydraulic control system is demonstrated not to be effective in containing and removing pollutants.

i. COMPLETION OF MODIFICATIONS TO INTERIM REMEDIAL ACTIONS — 05/01/94

Submit a technical report acceptable to the Executive Officer documenting completion of the necessary tasks identified in the technical report submitted for Provision 2.h.

j.	**PROPOSED FINAL CLEANUP OBJECTIVES AND REMEDIAL ACTIONS** Submit a technical report acceptable to the Executive Officer containing the results of the remedial investigation; an evaluation of the installed interim remedial measures; a feasibility study evaluating alternative final remedial measures; the recommended measures necessary to achieve final cleanup objectives; and the tasks and time schedule necessary to implement the recommended final remedial measures.	09/01/94

3. The submittal of technical reports evaluating immediate, interim and final remedial measures will include a projection of the cost, effectiveness, benefits, and impact on public health, welfare, and environment of each alternative measure. The reports shall be consistent with the guidance provided by:

   a. Subpart F of the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300);
   b. Section 25256.1 of the California Health and Safety Code;
   c. CERCLA guidance documents with reference to Remedial Investigations, Feasibility Studies, and Removal Actions; and
   d. the State Water Resources Control Board's Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality Waters in California".

4. Documentation of compliance with the Specifications and Provisions of this Order shall include groundwater contour maps, pollutant concentration contour maps, geologic cross sections, borehole logs (lithologic and geophysical), and laboratory analyses. These maps and illustrations shall be updated when submitted with each technical report required under this Order.

5. If the Dischargers are delayed, interrupted, or prevented from meeting one or more of the compliance dates specified in this Order, the Dischargers shall notify the Executive Officer by telephone prior to the compliance deadline date. Such notification in no way relieves the Dischargers of their obligation of meeting theses dates.

6. All hydrogeological plans, specifications, reports, and documents shall be signed by or stamped with the seal of a registered geologist, certified engineering geologist, or registered civil engineer.

7. All samples shall be analyzed by State certified laboratories using approved EPA methods for the type of analysis performed. All laboratories shall maintain quality assurance/quality control records for Board review.

8. The Dischargers shall submit detailed quarterly progress reports summarizing work accomplished towards compliance with the Provisions specified in this Order. The Regional Board shall receive the quarterly reports by the end of the second week following each quarter. Reports will be due in the months of April, July, October, and January. The reports shall include:

   a. a summary of work completed since the previous report,
   b. identification of potential problems which will cause or threaten to cause noncompliance with this Order,
   c. documentation of events of noncompliance and reasons therefore, and a plan for achieving compliance,

d. well construction data, cumulative groundwater levels and chemical analysis results presented in tabulated form for all site monitor wells,
e. raw chemical analysis results for all site monitor wells, and
f. a schedule of sampling frequency and type of analytic test method(s) to be used for all site monitor wells, updated as appropriate.

9. The Dischargers shall maintain in good working order and efficiently as possible, any facility or control system installed to achieve compliance with the requirements of this Order.

10. Copies of all correspondence, reports, and documents pertaining to compliance with the Prohibitions, Specifications, and Provisions of this Order shall be provided to the following agencies:

a. California Environmental Protection Agency DTSC/Region 2
c. U.S. Environmental Protection Agency/Region IX
d. Zone 7, Alameda County Flood Control District
d. Alameda County Health Department - Hazmat Division

11. The Dischargers shall permit the Board or its authorized representatives, in accordance with Section 13267(c) of the California Water Code:

a. entry upon premises in which any pollution sources exist, or may potentially exist or in which any required records are kept,
b. access to copy any records required to be kept under the terms and conditions of this Order,
c. inspection of any monitoring equipment or methods required by this Order, and
d. sampling of any groundwater or soil which is accessible, or may become accessible as part of any investigation or remedial action program, to the Dischargers.

12. The Dischargers shall file a report on any changes in site occupancy and/or ownership associated with the facility described in this Order.

13. If any hazardous substance is discharged in or on any waters of the State, or discharged and deposited where it is or probably be in or on any waters of the State, the discharger shall report such discharge to this Regional Board, at (510) 464-1255 on weekdays during office hours from 8 a.m. to 5 p.m., and to Office of Emergency Services at (800) 852-7550 during non-business hours.

The written reports shall be filed with the Regional Board within five working days and shall contain information relative to:

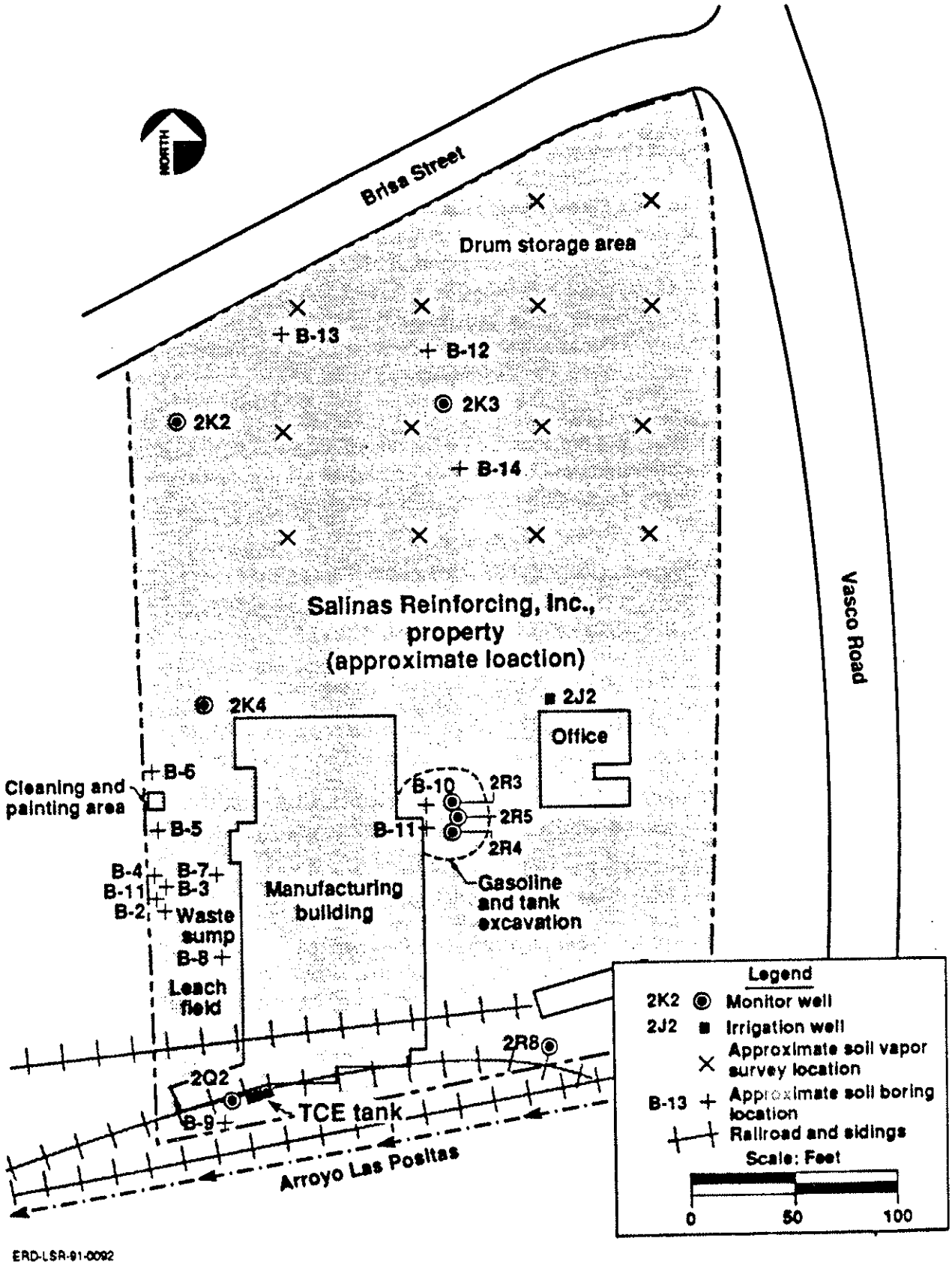
a. the nature of waste or pollutant,
b. quantity involved,
c. duration of incident,
d. cause of spill,
e. Spill Prevention, Control, and Countermeasure Plan in effect, if any,
f. estimated size of affected area,
g. nature of effect,
h. corrective measures that have been taken of planned and a schedule of theses activities, and
i. persons and agencies notified.

14. The Board will review this Order periodically and may revise the requirements or compliance schedule when necessary.

I, Steven R. Ritchie, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on February 19, 1992.

Steven R. Ritchie
Executive Officer

Attachments:
1. Facility Map
2. Vasco Road-Patterson Pass Road Area Map



ERD-LSR-91-0092

Figure 1. Wells, soil vapor locations, and boreholes at the Salinas Reinforcing, Inc., property; modified after SCS Engineers (1988c).

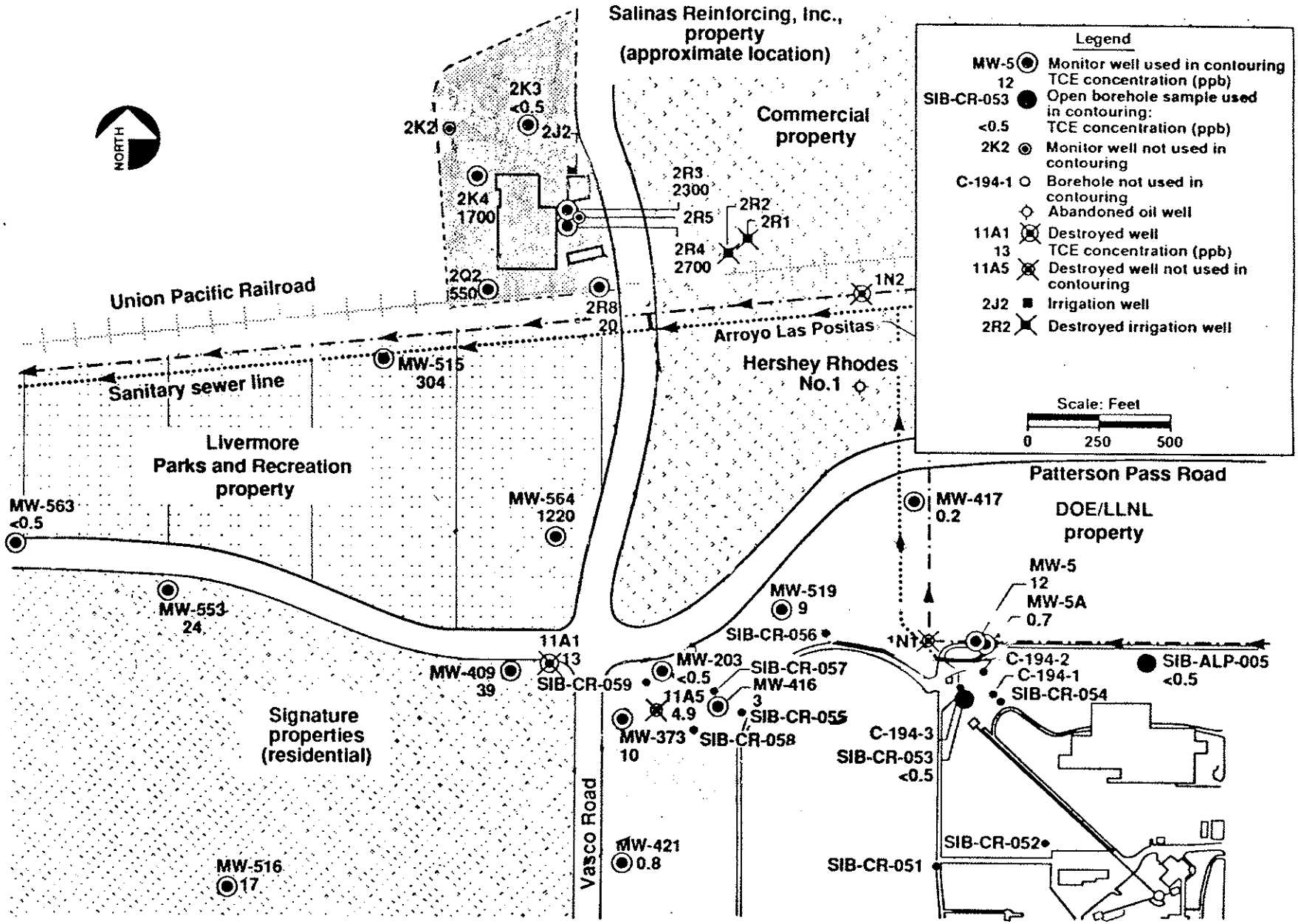

Salinas Reinforcing, Inc., property (approximate location)
Commercial property
Union Pacific Railroad
Arroyo Las Positas
Sanitary sewer line
Livermore Parks and Recreation property
Hershey Rhodes No.1
Patterson Pass Road
DOE/LLNL property
Signature properties (residential)
Vasco Road
NORTH
Legend
MW-5 12 Monitor well used in contouring TCE concentration (ppb)
SIB-CR-053 <0.5 Open borehole sample used in contouring: TCE concentration (ppb)
2K2 Monitor well not used in contouring
C-194-1 Borehole not used in contouring
Abandoned oil well
11A1 13 Destroyed well TCE concentration (ppb)
11A5 Destroyed well not used in contouring
2J2 Irrigation well
2R2 Destroyed irrigation well
Scale: Feet
0 250 500
2K3 <0.5
2K2
2J2
2K4 1700
2R3 2300
2R5
2R2
2R1
2R4 2700
2Q2 550
2R8 20
1N2
MW-515 304
MW-563 <0.5
MW-564 1220
MW-553 24
MW-409 39
11A1 13
SIB-CR-059
MW-203 <0.5
SIB-CR-057
MW-416 3
11A5 4.9
SIB-CR-055
SIB-CR-058
MW-373 10
MW-421 0.8
MW-516 17
MW-519 9
SIB-CR-056
MW-417 0.2
MW-5 12
MW-5A 0.7
1N1
C-194-2
C-194-1
SIB-CR-054
SIB-ALP-005 <0.5
C-194-3
SIB-CR-053 <0.5
SIB-CR-052
SIB-CR-051

Figure 2